

Title (en)
METHODS FOR FABRICATING ISOLATED MICRO- AND NANO- STRUCTURES USING SOFT OR IMPRINT LITHOGRAPHY

Title (de)
VERFAHREN ZUR HERSTELLUNG ISOLierter MIKRO- UND NANOSTRUKTUREN UNTER VERWENDUNG VON SOFT- ODER DRUCK- LITHOGRAPHIE

Title (fr)
PROCEDE DE FABRICATION DE MICROSTRUCTURES ET DE NANOSTRUCTURES AU MOYEN DE LA LITHOGRAPHIE MOLLE OU D'IMPRESSION

Publication
EP 1704585 B1 20170315 (EN)

Application
EP 04821787 A 20041220

Priority

- US 2004042706 W 20041220
- US 53153103 P 20031219
- US 58317004 P 20040625
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Abstract (en)
[origin: WO2005101466A2] The presently disclosed subject matter describes the use of fluorinated elastomer-based materials, in particular perfluoropolyether (PFPE)-based materials, in high-resolution soft or imprint lithographic applications, such as micro- and nanoscale replica molding, and the first nano-contact molding of organic materials to generate high fidelity features using an elastomeric mold. Accordingly, the presently disclosed subject matter describes a method for producing free-standing, isolated nanostructures of any shape using soft or imprint lithography techniques.

IPC 8 full level
H01L 21/302 (2006.01); **A61K 9/00** (2006.01); **A61K 9/51** (2006.01); **B81C 99/00** (2010.01); **G03F 7/00** (2006.01); **H01L 21/02** (2006.01); **H01L 51/00** (2006.01); **H01L 51/40** (2006.01)

CPC (source: EP KR US)
A61K 9/0097 (2013.01 - EP KR US); **A61K 9/14** (2013.01 - KR US); **A61K 9/5138** (2013.01 - EP KR US); **A61K 9/5153** (2013.01 - EP KR US); **A61K 9/5192** (2013.01 - EP KR US); **A61K 47/34** (2013.01 - US); **B81C 99/0085** (2013.01 - EP KR US); **B82Y 10/00** (2013.01 - EP US); **B82Y 40/00** (2013.01 - EP US); **G03F 7/0002** (2013.01 - EP KR US); **H01L 21/0274** (2013.01 - KR); **H10K 71/13** (2023.02 - KR); **H10K 71/60** (2023.02 - KR); **B82Y 40/00** (2013.01 - KR); **H10K 71/13** (2023.02 - EP US); **H10K 71/60** (2023.02 - EP US); **Y02E 10/549** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP); **Y10T 428/24273** (2015.01 - EP US); **Y10T 428/24479** (2015.01 - EP US); **Y10T 428/3154** (2015.04 - EP US)

Citation (examination)
CHAUDHURY M K ET AL: "CORRELATION BETWEEN SURFACE FREE ENERGY AND SURFACE CONSTITUTION", SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, US, vol. 255, 1 January 1992 (1992-01-01), pages 1230 - 1232, XP000570431, ISSN: 0036-8075, DOI: 10.1126/SCIENCE.255.5049.1230

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WO 2005101466 A2 20051027; WO 2005101466 A3 20070405; AU 2004318602 A1 20051027; AU 2004318602 B2 20091210; BR PI0417848 A 20070417; BR PI0417848 A8 20180206; BR PI0417848 B1 20190115; CA 2549341 A1 20051027; CA 2549341 C 20140610; CA 2847260 A1 20051027; CA 2847260 C 20160621; DK 1704585 T3 20170522; EP 1704585 A2 20060927; EP 1704585 A4 20100818; EP 1704585 B1 20170315; EP 3242318 A1 20171108; ES 2625345 T3 20170719; IL 176254 A0 20061005; IL 176254 A 20160421; IL 245063 A0 20160630; IL 245063 B 20180531; JP 2007526820 A 20070920; JP 2011223009 A 20111104; JP 2014168777 A 20140918; JP 2015008308 A 20150115; JP 5956116 B2 20160720; JP 6067954 B2 20170125; JP 6232320 B2 20171115; JP 6232352 B2 20171115; KR 101281775 B1 20130715; KR 101376715 B1 20140327; KR 102005840 B1 20190731; KR 20070011253 A 20070124; KR 20110114695 A 20111019; KR 20120105062 A 20120924; KR 20140100980 A 20140818; MX PA06006738 A 20060831; PT 1704585 T 20170505; US 10517824 B2 20191231; US 10842748 B2 20201124; US 11642313 B2 20230509; US 2009028910 A1 20090129; US 2009061152 A1 20090305; US 2014072632 A1 20140313; US 2015283079 A1 20151008; US 2018116959 A1 20180503; US 2020078301 A1 20200312; US 2021059940 A1 20210304; US 2023248651 A1 20230810; US 8263129 B2 20120911; US 8420124 B2 20130416; US 8992992 B2 20150331; US 9877920 B2 20180130

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US 2004042706 W 20041220; AU 2004318602 A 20041220; BR PI0417848 A 20041220; CA 2549341 A 20041220; CA 2847260 A 20041220; DK 04821787 T 20041220; EP 04821787 A 20041220; EP 17156921 A 20041220; ES 04821787 T 20041220; IL 17625406 A 20060612; IL 24506316 A 20160412; JP 2006545541 A 20041220; JP 2011104856 A 20110510; JP 2014054051 A 20140317; JP 2014161427 A 20140807; KR 20067012179 A 20041220; KR 20117020441 A 20041220; KR 20127023665 A 20041220; KR 20147018396 A 20041220; MX PA06006738 A 20041220; PT 04821787 T 20041220; US 201313852683 A 20130328; US 201514658386 A 20150316; US 201715846827 A 20171219; US 201916689733 A 20191120; US 202017095301 A 20201111; US 202318305051 A 20230421; US 58357004 A 20041220; US 82546907 A 20070706